

**Abstract**

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**METHODS FOR THE PREPARATION OF  
(3R,3aS,6aR) HEXAHYDRO-FURO[2,3-B]FURAN-3-OL**

The present invention relates to methods for the preparation of diastereomerically pure (3R,3aS,6aR) hexahydro-furo[2,3-b]furan-3-ol as well as a novel intermediate,  
10 (3aR,4S,6aS) 4-methoxy-tetrahydro-furo[3,4-b]furan-2-one for use in said methods. More in particular the invention relates to a stereoselective method for the preparation of diastereomerically pure (3R,3aS,6aR) hexahydro-furo[2,3-b]furan-3-ol, as well as methods for the crystallization of (3aR,4S,6aS) 4-methoxy-tetrahydro-furo[3,4-b]furan-2-one and for the epimerization of (3aR,4R,6aS) 4-methoxy-tetrahydro-furo[3,4-b]-  
15 furan-2-one to (3aR,4S,6aS) 4-methoxy-tetrahydro-furo[3,4-b]furan-2-one.